

CLAIMS

1. A latch either for sampling and latching continuous video data or for latching a latched result from an upstream sampling latch, said latch comprising:

    a CMOS latch cell;

    a power switch for connecting said CMOS latch cell to a power supply; and

    an input switch disposed at an input of said CMOS latch cell;

    wherein said power switch and said input switch are switched on and off complementarily in such a manner that, with said CMOS latch cell disconnected from said power supply, data to be latched is set on said CMOS latch cell and that, with said input of said CMOS latch cell disconnected from an upstream circuit, said power supply to said CMOS latch cell is switched on to level-shift the data set on said CMOS latch cell.

2. A latch driving method for driving a latch comprising a CMOS latch cell either for sampling and latching continuous video data or for latching a latched result from an upstream sampling latch, said latch driving method comprising the steps of:

    with said CMOS latch cell disconnected from a power supply, connecting an input of said CMOS latch cell to an

upstream circuit so as to set corresponding data on said CMOS latch cell; and

with said input of said CMOS latch cell disconnected from said upstream circuit, switching on said power supply to said CMOS latch cell so as to level-shift the data set on said CMOS latch cell.

3. A flat display apparatus comprising a display unit with pixels disposed in a matrix, and driving circuits for driving pixels of said display unit, said display unit and said driving circuits being formed integrally on a substrate;

wherein said driving circuits include a horizontal driving circuit for setting gradations for said pixels of said display unit, said horizontal driving circuit including:

a sampling latch for successively latching continuous video data;

a second latch for latching a latched result from said sampling latch on a line-by-line basis; and

a digital-to-analog converter circuit for converting an output of said second latch from digital to analog form for output to said display unit; and

wherein either said sampling latch or said second latch acts in such a manner that, with a CMOS latch cell

disconnected from a power supply, an input of said CMOS latch cell is connected to an upstream circuit so as to set corresponding data on said CMOS latch cell and that, with said input of said CMOS latch cell disconnected from said upstream circuit, said power supply to said CMOS latch cell is switched on to level-shift the data set on said CMOS latch cell.